

REMARKS

Claims 1-13, 17, 19-21, 23, 24, 28, 29, 36-38, 41-58, 61, 63, 69, 71-73, 76, 81 and 96 were pending in the application. Claims 2, 8, 13, 28 and 29 are canceled without prejudice to their presentation in a continuing application. Claims 100-104 are added herein. Thus, upon entry of this amendment, **claims 1, 3-7, 9-12, 17, 19-21, 23, 24, 36-38, 41-58, 61, 63, 69, 71-73, 76, 81, 96 and 100-104 will be pending**; of these, claims 7-10, 12, 20, 21, 36, 37, 42-44, 46-58, 61, 63, 69, 71-73, 76 and 81 are withdrawn.

Claim 1 is amended to specify that the peptides are selected from P11-3 and P11-5, and to clarify that the β -sheet structures are formed at physiologic pH. Claims 5 and 11 are amended to correct minor typographical errors. New claims 100 and 101 specify that the peptide is P11-3 or P11-5, respectively. New claims 102-104 recite limitations on pH values and salt concentration. Support for these amendments can be found in the specification and claims as originally filed. For example, a description of pH and salt concentrations (also referred to as ionic strength) can be found at paragraph [0042], and in Examples 2-4 of the specification.

The specification is amended to insert appropriate headers and correct typographical errors. The paragraph numbering used in this Amendment and Response correspond to the paragraph numbering of the published application. No new matter is introduced by these amendments.

RESTRICTION AND ELECTION

The requirement for restriction between the claims of Groups 1 to 33 has been made final. However, Applicants note that upon allowance of one or more linking claims (claims 1, 3-7, 9, 10, 12, 19, 23, 24, 28, 29, 36, 38, 41-58, 71-73, 76, 81 and 96), all claims depending from or otherwise incorporating all limitations of the allowed linking claim(s) is entitled to examination. Applicants further note that although the requirement for an election of species was traversed in the Amendment and Response to Restriction Requirement submitted May 29, 2007, the instant Office action did not address this traversal. Applicants request clarification on this point. If the requirement for election of species has been maintained, Applicants will be entitled to examination of additional species upon indication of allowability of a generic claim.

OBJECTIONS TO THE SPECIFICATION

The specification is objected to because the arrangement is not outlined as suggested by 37 C.F.R. §1.77(b). Applicants note that 37 C.F.R. §1.77(b) merely suggests guidelines for the *preferred* layout of the specification. Applicant is not required to conform to the specific arrangement illustrated in the Office action. However, in order to be fully responsive, the specification is amended herein to conform to these guidelines as much as possible based on the instant specification. The Title, Cross-Reference to Related Applications, Claims, Abstract and Sequence Listing (and appropriate headers where applicable) were provided either at the time of filing, or were included with the Preliminary Amendment filed January 13, 2005 or the Preliminary Amendment filed July 26, 2006. The specification is amended herein to insert headers for the Background, Detailed Description and Brief Description of the Drawings. The remainder of the headers listed in the Office action are not applicable. Applicants believe the specification is in compliance with 37 C.F.R. §1.77(b).

The specification is further objected to for typographical errors in Example 3. In response, the specification is amended herein to correct the errors noted by the Office.

Accordingly, Applicants request withdrawal of the above objections to the specification.

REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 1, 3 and 4 are rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite.

In regard to claim 1, the Office indicates that it is unclear how the “net charge” of the peptides or pair of complementary peptides is determined. As discussed in paragraph 4 of the Declaration of Dr. Amalia Aggeli (referred to herein as the Aggeli Declaration), the net charge is the sum of the charges of an individual peptide or a pair of complementary peptides. As described in the specification, peptides P11-3 and P11-5 have a net charge of -2 and +2, respectively. For clarity, claim 1 is amended herein to specify that the peptides are selected from P11-3 and P11-5.

In regard to claim 4, the Office indicates it is unclear how a peptide having 11 amino acids can have a ratio of polar/neutral amino acids to charged amino acids of 11:1 to 11:3, since this implies the peptide is 12 or 14 amino acids in length. Claim 4 is amended herein to indicate

that the recited ratio is a comparison of *total amino acids* to charged amino acids, as taught in the specification.

Applicants submit claims 1, 3 and 4 are now clear. Accordingly, withdrawal of the pending rejections under 35 U.S.C. §112, second paragraph is requested.

REJECTION UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Claims 1, 3-6, 11, 17, 19, 23, 24, 28, 38, 41, 45 and 96 are rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement. The Office alleges the specification does not provide adequate written description for the breadth of claim 1. Although Applicants disagree, solely in an effort to advance prosecution, claim 1 is amended herein to recite that the peptides are selected from P11-3 and P11-5. This limitation was previously recited in claim 2, which was not included in the instant rejection. Each of the remaining rejected claims depends directly or indirectly from claim 1. Thus, Applicants submit the pending claims are fully and adequately described by the specification and request withdrawal of this rejection under 35 U.S.C. §112, first paragraph.

REJECTION UNDER 35 U.S.C. §102

Claims 1-6, 11, 13, 17, 19, 23, 24, 28, 38, 41, 45 and 96 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by Aggeli *et al.* (*Peptide Science – Present and Future*, 1999, 30-33). The Office alleges Aggeli *et al.* teach a peptide having the sequence of P11-3 that self-assembles into a β -sheet structure at pH values less than 4. The Office concludes the teachings of Aggeli *et al.* meet the limitations of each of the above-listed claims. Claims 2, 13 and 28 are canceled herein, rendering the rejection moot as it applies to these claims. Applicants traverse this rejection as it applies to claims 1, 3-6, 11, 17, 19, 23, 24, 38, 41, 45 and 96 and request reconsideration.

As recited herein, claim 1 is directed to a material comprising ribbons, fibrils or fibres, wherein each of the ribbons, fibrils or fibres has an antiparallel arrangement of peptides in a β -sheet tape-like substructure *at physiological pH*, wherein each peptide comprises a net -2 or a +2 charge, and wherein the peptides are selected from P11-3 and P11-5. The remainder of the rejected claims depend directly or indirectly from claim 1.

In contrast to the pending claims, Aggeli *et al.* teach that a peptide having the amino acid sequence of P11-3 is only capable of forming a β -sheet tape-like structure at pH 4 or less. In fact, Aggeli *et al.* teach that this peptide is a **fluid** at physiologic pH (Figure 2 of Aggeli *et al.*) (see paragraph 6 of the Aggeli Declaration). Thus, based on the teachings of Aggeli *et al.*, one of skill in the art would not have recognized that a peptide having the amino acid sequence of P11-3 would form a β -sheet structure at physiological pH as instantly claimed. Furthermore, in paragraph 5 of the Aggeli Declaration provided herewith, Dr. Aggeli describes the importance of the peptide having a -2 or +2 charge for forming the β -sheet structure, which was not recognized by the Aggeli *et al.* reference.

Thus, because Aggeli *et al.* do not teach each and every limitation of the pending claims, the claims are not anticipated. Accordingly, Applicants request withdrawal of this rejection under 35 U.S.C. § 102(b).

CONCLUDING STATEMENT

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Withdrawal of the pending rejections and reconsideration of the claims is respectfully requested. If the Examiner believes that there are any remaining issues in the case that could be resolved by a telephonic interview, the Examiner is encouraged to contact the representative for Applicants listed below to discuss any outstanding matters.

Respectfully submitted,

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